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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,955

03/26/2004

Robert C. Amott

5752

9824

7590

02/08/2007

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Spartanburg, SC 29304

EXAMINER

MATZEK, MATTHEW D

ART UNIT

PAPER NUMBER

1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/810,955

Applicant(s)

ARNOTT, ROBERT C.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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Response to Amendment

1. The amendment dated 11/28/2006 has been fully considered and entered into the Record. Amended claim 21 contains no new matter. Claims 1-32 are currently pending, but claims 1-20 have been withdrawn from prosecution. Claims 21-32 are currently active.

Terminal Disclaimer

2. The terminal disclaimer filed on 11/28/2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of application 10/831,931 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 21-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yilgör et al. (US 5,521,273 A) in view of Masumoto et al. (US 5,981,407).

a. '273 teaches a process for coating a fabric with a two different urethane polymeric compositions which, together, form a composite coating that reads on applicant's claimed "combination of a first urethane polymer and a second urethane polymer." The fabric may be woven, nonwoven or knit (col. 5, lines 21-26). The coating may further contain flame retardants (col. 6, lines 7-12). Each of the urethane compositions have an elongation at break of 500-600% or greater (col. 6, lines 23-26). This teaching renders obvious Applicant's claimed urethane "having an elongation at break of less than 500%," since a *prima facie* case of

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obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Here, it is Examiner's position that an elongation at break of 499.9...9% is both less than 500% and close enough to 500% so that one of ordinary skill in the art at the time the invention was made would have expected them to have the same properties. '273 fails to teach that the ratio of the first urethane polymer to the second urethane polymer is between 20:1 and about 5:1 on a solids basis.

b. The relative amounts of each urethane polymer and the coating's add-on weight percentage are result-effective variables effecting the thickness and overall weight of the coated fabric, the breathability of the coated fabric, etc. (col. 6 lines 6-39). Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the claimed ratio, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). '273 fails to teach the use of the urethane coating on a flame retardant fabric.

c. Matsumoto et al. teach a flame retardant fabric (Abstract) comprising a halogen containing polyester fiber (col. 2, lines 27-30). The halogen containing fiber may comprise a phosphorus compound such as tris(2,3-dichloropropyl) phosphate (col. 3, lines 15-17).

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d. Since Yilgör et al. and Matsumoto et al. are from the same field of endeavor (i.e. fabrics), the purpose disclosed by Matsumoto et al. would have been recognized in the pertinent art of Yilgör et al.

e. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the article of Yilgör et al with the flame retardant cloth of Matsumoto et al. The skilled artisan would have been motivated by the desire to make the article more flame retardant.

f. Furthermore, it has been shown that “[i]n order to rely on a reference as a basis for rejection of an Applicant’s invention, the reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992).

g. The invention of Yilgör et al. is silent as to the state of clarity of the polymeric coating. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the polymeric coating of Yilgör et al. transparent. The invention of Yilgör et al. is directed to coating various fabrics to enhance their physical properties (col. 4, lines 46-67). A skilled artisan would have been motivated to make the polymeric coating of Yilgör et al. transparent so that the aesthetics of the coated article were not adversely affected, while enhancing its physical properties.

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h. Claims 29 and 30 are rejected as urethane may comprise aliphatic and polyester groups (claim 1).

i. Although, Yilgör et al. nor Matsumoto et al. explicitly teaches the claimed features of the passing the NFPA Small Scale 701 Vertical Flame Test (1989) or having hand of at least 900 grams in the wales direction and at least 400 grams in the courses direction, it is reasonable to presume that said properties are inherent to combined product of Yilgör et al and Matsumoto et al. Support for said presumption is found in the use of like materials (i.e. first and second urethane polymers coated on a chlorinated phosphate ester fabric). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties of passing the NFPA Small Scale 701 Vertical Flame Test (1989) or having hand of at least 900 grams in the wales direction and at least 400 grams in the courses direction would obviously have been present one the combined product of Yilgör et al. and Matsumoto et al. is provided. Note *In re Best*, 195 USPQ at 433, footnote (CCPA 1977) as to the providing of this rejection made above under 35 USC 102. Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner*, et al. (CCPA) 186 USPQ 80.

Response to Arguments

4. Applicant's arguments filed 11/28/2006 have been fully considered but they are not persuasive.

5. Applicant argues that since Yilgör et al. teach the use of polymer layers with an elongation at break of greater than 725% the reference fails to teach a component that

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will provide firmness to the coating. As pointed out in the rejection above the reference teaches the use of polymers with an elongation at break of 500-600% or greater (col. 6, lines 23-26) along with Examiner's reasoning as to why the instant claim limitation is rendering obvious over the applied reference.

6. Applicant argues that Yilgör et al. fail to teach or suggest the use of urethane polymers in a single layer. Examiner admits that the applied invention teaches the application of the adhesive and top coating layer separately, however as described in Example 8 the adhesive and top coating are cured together forming a unitary coating layer. This meets the current claim limitation of "a polymer finish applied in a single layer".

7. Applicant argues that Yilgör et al. and Matsumoto et al. are not from the same field of endeavor and as such have been improperly combined. Examiner has modified the common field of endeavor to fabrics. Along with this common field, it has been shown that "[i]n order to rely on a reference as a basis for rejection of an Applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992).

8. Applicant argues that there is no motivation to combine the teachings of Yilgör et al. and Matsumoto et al. The motivation to combine the teachings of Yilgör et al. and

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Matsumoto et al. are provided in the secondary reference and that is to provide fabrics with flame retardancy and excellent processability (col. 1, lines 5-9; Matsumoto et al.).

9. Applicant argues that just because the references can be combined or modified does not render the resultant combination obvious. Col. 1, lines 13-33 of Matsumoto et al. teaches the desirability to impart fabrics with the properties of Matsumoto et al. Therefore, the desirability of the combination is provided by the secondary reference.

10. Applicant argues that neither of the applied references teaches a polymer finish comprised of two different urethane polymers, one of which has a high elongation and the other which has a low elongation. As set forth in the rejection above the instantly claimed properties are rendered obvious over the coating of the applied reference.

11. Applicant argues that the references also fail to teach or suggest the appropriate ratio of the high elongation urethane to the low elongation urethane. The language of high and low elongation urethane is not supported in the instant claims and the ratio of the two urethane polymers has been addressed in the rejection section of this Action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mdm

MDM

Norca

Norca L. Torres-Velazquez
Primary Examiner
Art Unit 1771

1/5/07